Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Previously Presented): A method of management in a circuit-switched communication network (1), the method being performed on, or with the aid of, at least one programmable device (10) connected to said network, comprising:

computing (202) and storing (203) in an electronic memory (1018, 1020) a representation of the network based on B-blocking islands (N_i),

each B-blocking island comprising:

a maximal set of nodes (A-G) linked in a such a way that at least one route with at least an amount B of concave resources exists between any pair of nodes in the set at the time t.

Claim 2 (Previously Presented): Method according to Claim 1, further comprising:

organizing said Bi-blocking islands (N_i) in a hierarchy, wherein a hierarchical position of each B_i-blocking island depends on the choice of the value B_i used for defining said blocking island.

Claim 3 (Original): Method according to Claim 2, wherein said values B_i used for defining the blocking island hierarchy are predefined according to common resources requirements.

Claim 4 (Previously Presented): Method according to Claim 3, further comprising:

changing dynamically said values B_i used for defining the blocking island hierarchy.

Claim 5 (Previously Presented): Method according to one of the claims 2, further comprising:

dynamically merging at least one hierarchical level two B-blocking islands when deallocation of an established circuit in said network (1) has freed enough resources on a link (I_i) between said two B-blocking islands (N_i) such that at least an amount B of resources is available on said link (I_i).

Claim 6 (Previously Presented): Method according to one of the claims 2, further comprising:

dynamically splitting at least one hierarchical level a B-blocking island (N_i) when establishment of a new circuit using at least one link between two nodes inside said B-blocking island uses too many resources to allow a route with at least an amount B of resources between any pair of nodes inside said B-blocking island.

Claim 7 (Previously Presented): Method according to one of the claims 2, further comprising:

updating said B-blocking island hierarchy in the case of rerouting of demands, link failure or link removal, alteration of the properties of a link, adding of a link, node failure, node removal or node addition.

Claim 8 (Previously Presented): Method according to one of the claim 1, said method configured to find a path between at least two nodes (A-G) in a circuit-switched communication network (1) with at least an amount b of resources available, a search of said

path being confined to a B-blocking island comprising at least two said nodes, and B being bigger than b.

Claim 9 (Previously Presented): Method according to Claim 8, further comprising:

selecting the most suitable path by analyzing the impact each path has on the structure of blocking islands hierarchy.

Claim 10 (Previously Presented): Method according to claim 8, further comprising:

selecting the most suitable path by comparing at which level of the B-blocking island hierarchy each route appears.

Claim 11 (Previously Presented): Method according to the claim 8, wherein search space for a demand of the routing algorithm is reduced to the subnetwork summarized by the B-blocking island with a greatest predefined B that contains the endpoints of said demand.

Claim 12 (Previously Presented): Method according to claim 2, said method configured to reroute connections that use more critical links at level B_i of the hierarchy than necessary (zig-zag connections).

Claim 13 (Previously Presented): Method according to claim 2, said method configured to determine the price of a communication, said price being dependent at least partially on the hierarchical level of the links (I_i) used by the circuit established for the communication in said hierarchy of B-blocking islands.

Claim 14 (Previously Presented): Method according to claim 2, said method configured to analyze the behavior of an existing circuit-switched communication network or planning the construction of a new circuit-switched communication network or the modification of an existing circuit-switched communication network.

Claim 15 (Previously Presented): Method according to one of the claim 1, said method being based on a hierarchy of autonomous intelligent agents, each agent being responsible for a set of nodes in said circuit-switched communication network, with higher level agents arbitrating conflicts between peer agents, each agent being responsible for a dynamically defined set of nodes (N_i) consisting of nodes linked in a such a way that at least a route with at least an amount B of concave resources exists between any pair of nodes in the set at the time t, and a level of the agents in said hierarchy are dependent on a choice of the value B used for defining said set of nodes.

Claim 16 (Previously Presented): Method according to Claim 15, said method configured to route demands between at least two nodes in a circuit-switched communication network (1), and comprising the following steps undertaken when a new demand arises issued by a network node x which needs to communicate with at least one other node y, an amount B of resources being requested for that communication:

first the node x asks the agent responsible for the node x with the lowest level in the hierarchy of agents to establish a circuit for said new demand,

said agent passes on this demand to the agent at the next level in the hierarchy,

until the agent at the level B is reached, which then finds a route between x and y and establishes the circuit.

Claim 17 (Previously Presented): Method according to Claim 15, said method configured to determine a price of a communication, said price being dependent at least partially on the hierarchical level of the links (I_i) used by the circuit established for the communication in said hierarchy of blocking islands.

Claim 18 (Previously Presented): Method according to Claim 1, wherein said resource used for determining the nodes belonging to the same B-blocking island is the bandwidth.

Claim 19 (Previously Presented): Method according to Claim 1, performed on a central hardware and software management platform (10).

Claim 20 (Previously Presented): Method according to Claim 1, performed by distributed communication and/or terminal nodes in the network.

Claim 21 (Previously Presented): Method according to Claim 1, wherein said circuit-switched communication network (1) is an ATM network.

Claim 22 (Original): Method according to Claim 21, said method being used for a connection admission control function (CAC) in an ATM switch (10), the routing module of the connection admission control employing a blocking island hierarchy.

Claim 23 (Previously Presented): Method according to Claim 1, wherein said circuit-switched communication network (1) is a SDH network.

Claim 24 (Previously Presented): Method according to Claim 1, wherein said circuit-switched communication network (1) is a RSVP and TCP/IP network.

Claim 25 (Previously Presented): Method according to Claim 1, wherein said circuit-switched communication network (1) is a TDM network.

Claim 26 (Previously Presented): A device (10) which can be used as a terminal node or as a communication node in a circuit-switched communication network (1), comprising:

means (1016, 1018, 1020) for computing a representation of the network based on B-blocking islands (N_i), each B-blocking island comprising a maximal set of concave nodes linked in a such a way that at least one route with at least an amount B of resources exists between any pair of nodes in the set at the time t; and

means (1018, 1020) for storing said representation.

Claim 27 (Previously Presented): Device according to Claim 26, further comprising:

means for organizing said B-blocking islands (N_i) in a hierarchy, wherein the hierarchical position of each B_i-blocking island depends on the choice of the value B_i used for defining said blocking island.

Claim 28 (Original): Device according to Claim 27, wherein said values Bi used for defining the blocking island hierarchy are predefined according to common resources requirements.

Claim 29 (Previously Presented): Device according to Claim 28, further comprising:

means for dynamically changing said values B_i used for defining the blocking island hierarchy.

Claim 30 (Previously Presented): Device according to claim 26, further comprising:

means for dynamically merging at least one hierarchical level two B-blocking islands (N_i) when deallocation of an established circuit in said network has freed enough resources on a link (I_i) between said two B-blocking islands such that at least an amount B of resources is available on said link (I_i).

Claim 31 (Previously Presented): Device according to claim 26, further comprising:

means for dynamically splitting at least one hierarchical level a B-blocking island when establishment of a new circuit using at least one link between two nodes inside said B-blocking island uses too many resources to allow a route with at least an amount B of resources between any pair of nodes inside said B-blocking island.

Claim 32 (Previously Presented): Device according to claim 26, further comprising:

means for updating said B-blocking island hierarchy in the case of rerouting of demands, link failure or link removal, alteration of the properties of a link, adding of a link, node failure, node removal or node addition.

Claim 33 (Previously Presented): Device according to claim 26, further comprising:

routing means for finding a path between at least two nodes (A-G) in said circuit-switched communication network (1) with at least an amount b of resources available, wherein said routing means use said storing means to confine the search of said path to a B-blocking island comprising at least two said nodes, B being bigger than b.

Claim 34 (Previously Presented): Device according to Claim 33, further comprising:

means for selecting the most suitable path by analyzing the impact each path has on the structure of the blocking islands hierarchy.

Claim 35 (Previously Presented): Device according to claim 33, further comprising:

means for selecting the most suitable path by comparing at which level of the B-blocking island hierarchy each route appears.

Claim 36 (Previously Presented): Device according to the claim 33, further comprising:

means for reducing the search space for a demand of the routing algorithm to the subnetwork summarized by the B-blocking island with the greatest predefined B that contains the endpoints of said demand.

Claim 37 (Previously Presented): Device according to claim 26, said device being a price determination device configured to determine the price of a communication, wherein said price depends at least partially on the hierarchical level of the links (I_i) used by the circuit established for the communication in said hierarchy of blocking islands.

Claim 38 (Previously Presented): Device according to claim 26, said device being a network planning tool configured to analyze the behavior of an existing circuit-switched communication network or planning the construction of a new circuit-switched communication network and the modification of an existing circuit-switched communication network.

Claim 39 (Previously Presented): Device according to claim 26, further comprising: means (1021) to connect it to said circuit-switched communication network (1).

Claim 40 (Original): Device according to Claim 39, being a central hardware and software management platform in a circuit-switched communication network (1).

Claim 41 (Original): Device according to Claim 39, being a local terminal or communication node in a circuit-switched communication network (1) with distributed management.

Claim 42 (Previously Presented): Device according to Claim 41, wherein said distributed management is based on a hierarchy of autonomous intelligent agents, each agent being implemented in a local master, node responsible for a dynamically defined set of nodes in said circuit-switched communication network, wherein higher level agents arbitrate conflicts between peer agents, each agent being responsible for a dynamically defined set of nodes (N_i) comprising nodes linked in a such a way that at least a route with at least an amount B of concave resources exist between any pair of nodes in the set at the time t, and in that the level of each agent in said hierarchy, depends on the choice of the value Bused for defining said set of nodes.

Claim 43 (Previously Presented): Device according to Claim 26, wherein said circuit-switched communication network (1) is an ATM-network.

Claim 44 (Previously Presented): Device according to Claim 26, wherein said circuit switched communication network (1) is a SDH network.

Claim 45 (Previously Presented): Device according to Claim 26, wherein said circuit switched communication network (1) is a RSVP and TCP/IP network.

Claim 46 (Previously Presented): Device according to Claim 26, wherein said circuit-switched communication network (1) is a TDM network.

Claim 47 (Previously Presented): Device according to claim 26, wherein a resource configured to determine nodes belonging to the same B-blocking island is a bandwidth.

Claim 48 (Previously Presented): A planning method for circuit-switched communication network (1), the method being performed on or with the aid of at least a programmable device (101) storing a representation of said network, comprising:

computing and storing in an electronic memory (1018, 1020) a representation of the network (1) based on B-blocking islands (N_i), each B-blocking island comprising a maximal set of nodes linked in a such a way that at least a route with at least an amount B of concave resources exist between any pair of nodes in the set.

Claim 49 (Previously Presented): Planning method according to Claim 48, further comprising:

organizing said B-blocking islands in a hierarchy wherein the hierarchical position of each B-blocking island depends on the choice of the value B used for defining said B-blocking island.

Claim 50 (Previously Presented): Planning method according to claim 48, further comprising:

the step of graphically displaying on a display (1014) connected to said programmable device (101) a summarized representation of said network.

Claim 51 (Previously Presented): Planning method according to Claim 50, further comprising:

graphically highlighting on said display (1014) critical links between said blocking islands.

Claim 52 (Previously Presented): Network planning tool (101) configured to analyze a behavior of an existing circuit-switched communication network (1) and/or for planning modification of an existing network, said network planning tool comprising:

processing means (1016);

storing means (1018, 1020);

display means (1014);

program code means for causing said processing means (1016) to compute, from a representation of the topology of the network and from a set of demands, a summarized representation of the state of said network at a time t, wherein

said summarized representation summarizes available resources by grouping at least some nodes of said network into a plurality of B-blocking islands (N_i), each B-blocking island comprising a set of nodes linked in a such a way that at least one route with at least an amount B of resources exists between any pair of nodes in the set at the time t; and

program code means (1011) for causing said processing means (1016) to store in said storing means (1018, 1020) and to display on said display means (1014) said summarized representation.

Claim 53 (Previously Presented): A device (10) configured as a terminal node or as a communication node in a circuit-switched communication network (1), comprising:

means for computing, means for storing, and means for updating at least a part of a B-blocking island hierarchy, said B-blocking island comprising a maximal set of concave nodes linked in a such a way that at least one route with at least an amount B of resources exists between any pair of nodes, in the set at the time t, and the position of each B-blocking island in said B-blocking island hierarchy being dependent on the choice of the value B_i used for defining said blocking island.

Claim 54 (Previously Presented): A program storage device (1011) readable by a programmable apparatus (101) and configured in such a way that it causes said programmable apparatus (101) to perform the method according to Claim 1.

Claim 55 (Currently Amended): A program storage device (1011) according to Claim 54, wherein said programmable apparatus (101) comprises:

means (1016, 1018, 1020) for computing a representation of the network based on B-blocking islands (N_i), each B-blocking island comprising a maximal set of concave nodes linked in a such a way that at least one route with at least an amount B of resources exists between any pair of nodes in the set at the time t; and

means (1018, 1020) for storing said representation.~~is a device according to Claim 26~~.

Claim 56 (Previously Presented): Circuit-switched communication network (1) comprising at least one device (10) according to Claim 26.

Claim 57 (Previously Presented): A program storage device (1011) readable by a computer and configured in such a way that it causes said computer to perform the method according to Claim 48.

Claim 58 (Previously Presented): A processor readable medium (1011) which is configured in such a way that it causes a programmable device (10) to compute, store and update at least a part of a blocking island hierarchy, said B-blocking island comprising a maximal set of concave nodes linked in a such a way that at least one route with at least an amount B of resources exists between any pair of nodes in the set at the time t, and the position of each B-blocking island in said B-blocking island hierarchy being dependent on the choice of the value B, used for defining said blocking island.